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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,561	02/10/2004	Dmitry Cherkassky		2785
7590 07/13/2005				
DMITRY CHERKASSKY P.O. BOX 102 VOORHEES, NJ 08043			EXAMINER LAU, TUNG S	
			ART UNIT 2863	PAPER NUMBER

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No. 10/776,561	Applicant(s) CHERKASSKY, DMITRY	
	Examiner Tung S. Lau	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

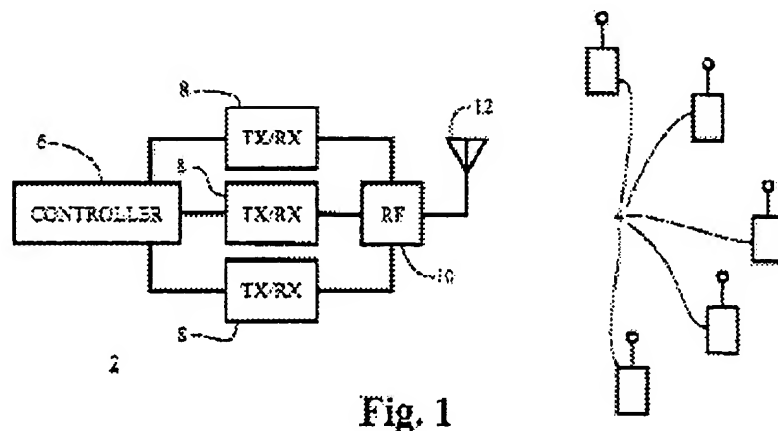
Claims 1-28 are rejected under 35 U.S.C. 102(a) as being anticipated by  
McCarty, JR. et al. (U.S. Patent Application Publication 2002/0159553).

Regarding claim 1:

McCarty, JR. discloses a state estimation system for determining possible values of a measured data item comprising: a computer (fig. 1, unit 2); at least one measurement input to the computer measuring the data item (fig. 1, unit 8), said measurement corrupted by noise (page 1, section 0006-0008); a computer output device (fig. 3, unit 52); at least one restriction on the measured data item (fig. 3, unit 28, 34, 44), said restriction available in memory to the computer (fig. 16, unit 186-198); and a software module operating on the computer for calculating at least one estimate of the state of the measured data item based upon the measurement input and the restriction (fig. 16, unit 180-214), and sending the estimate to the output device (fig. 3, unit 52); wherein the software module calculates the estimate by representing the state space of the measured data item as a finite set of points using the restriction; and applying a

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decision rule (fig. 3, unit 28, 34, 44), said decision rule based on the finite set of points, to the measurement input (fig. 3, unit 26).



Regarding claim 9:

McCarty, JR. discloses a system for making decisions related to a task comprising: a computer (fig. 1, unit 6); at least one confidence set available to the computer in memory (page 1, unit 0008-0010, fig. 16, unit 186), said confidence set describing the value of a first state variable; a task definition available to the computer in memory (fig. 16, unit 186); a description of possible decisions available to the computer in memory (fig. 16, unit 200); a description of effects of the possible decisions on a second state variable available to the computer in memory; a computer output device (fig. 16, unit 208); a software module operating on the computer for making decisions based on the confidence set (fig. 16, unit 200), the task definition (fig. 16, unit 192), the possible decisions and the description of effects (fig. 16, unit 200), and sending the decision to the output device (fig. 16, unit 200); wherein the software module selects at least one decision from the possible decisions by performing calculations on the effects of

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possible decisions on the second state variable (fig. 16, unit 194), while restricting the calculations based upon the confidence set and evaluating values resulting from the calculations for compatibility with the task definition (fig. 16, unit 192-198).

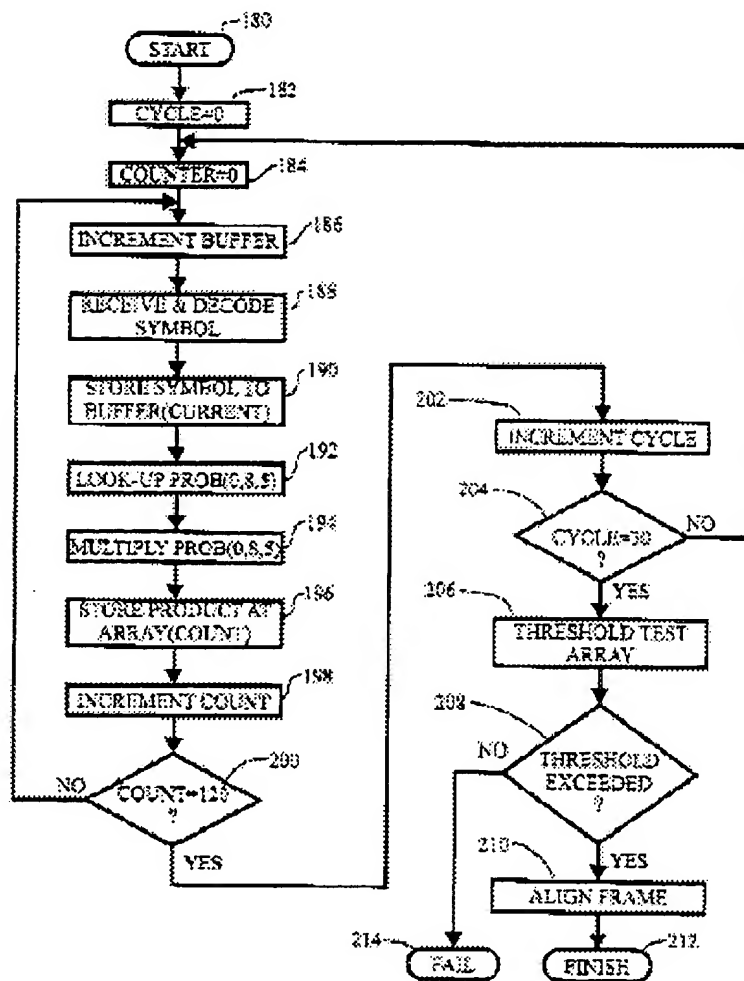


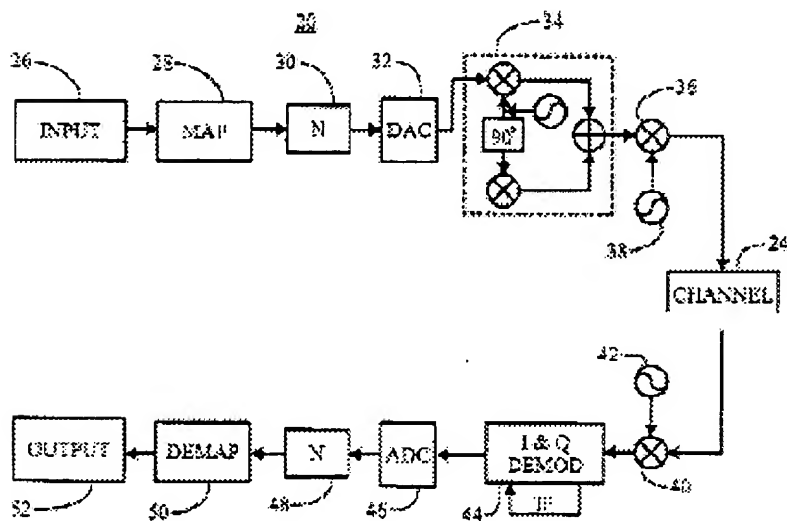
Fig. 16

Regarding claim 15:

McCarty, JR. discloses a state estimation method for determining possible values of a measured data item using a computer to perform the following steps: reading

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at least one measurement corrupted by noise (page 1, section 0006-008);  
determining at least one restriction on the measured data item (fig. 16, unit 192-198); calculating at least one estimate of the state of the measured data item based upon the measurement and the restriction by representing the state space of the measured data item as a finite set of points using the restriction and applying a decision rule (fig. 16, unit 184-200), said decision rule based on the finite set of points (fig. 3, unit 26), to the measurement input; and sending the estimate to an output device (fig. 3, unit 52).



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**Fig. 3**

Regarding claim 23:

McCarty, JR. discloses a method for making decisions related to a task using a computer to perform the following steps: reading at least one confidence set (page 1, unit 0008-0010), said confidence set describing the value of a first state

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variable (fig. 16, unit 188); reading a task definition (fig. 16, unit 192); reading a description of possible decisions (fig. 16, unit 192); reading a description of effects of the possible decisions on a second state variable (fig. 16, unit 196); selecting at least one decision based on the confidence set (fig. 16, unit 200), the task definition, the possible decisions and the description of effects by performing calculations on the effect of possible decisions on the second state variable (fig. 16, unit 202), while restricting the calculations based upon the confidence set (fig. 16, unit 204); and evaluating values resulting from the calculations for compatibility with the task definition (fig. 16, unit 206), and sending the selected decision to an output device (fig. 16, unit 210).

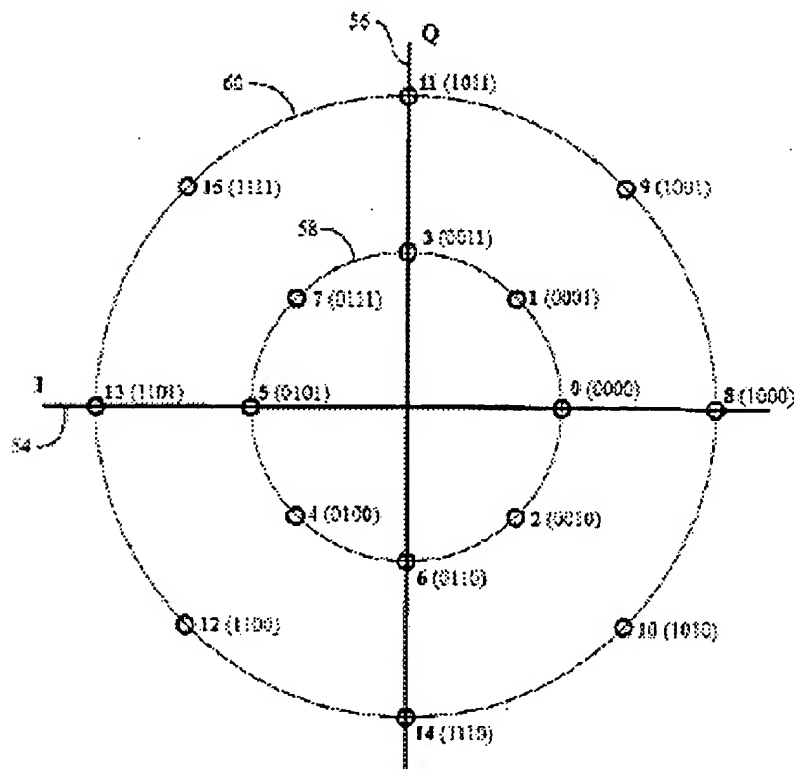
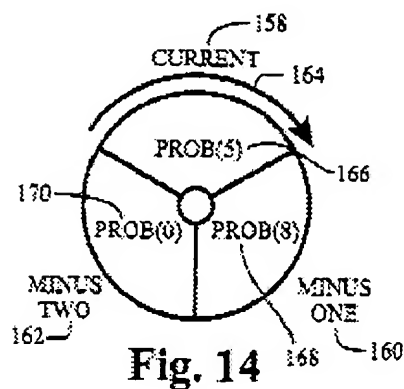


Fig. 4

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Regarding claims 2, 16, McCarty, JR. further discloses decision is minimax (page 5, section 0045); Regarding claims 3, 17, McCarty, JR. further discloses prior statistical information about the measured data item is available in memory to the computer, and the decision rule uses the statistical information (fig. 16, unit 192, page 1, section 0008-0010); Regarding claims 4, 18, McCarty, JR. further discloses plurality of values (fig. 16, unit 186, 200); Regarding claims 5, 19, McCarty, JR. further discloses on a loss function (page 5, section 0045, page 7, section 0059-0062, page 1, section 0008); Regarding claims 6, 20, McCarty, JR. further discloses loss function is zero-one (page 5, section 0045, fig. 4);



Regarding claims 7, 21, McCarty, JR. further discloses forms a confident set (fig. 14); Regarding claims 8, 22, McCarty, JR. further discloses a second software module (fig. 16, unit 204); Regarding claims 10, 24, McCarty, JR. further discloses an estimation system (fig. 10, unit 112-132); Regarding claims 11, 25, McCarty, JR. further discloses first and second variable are a vector with at least one variable (fig. 11); Regarding claims 12, 26, McCarty, JR. further discloses the some of the first and second vectors are the same (fig. 11); Regarding claims



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13, 27, McCarty, JR. further discloses there is a plurality of confidence sets from different sources and the information contained in said confidence sets is fused (fig. 11); Regarding claims 14, 28, McCarty, JR. further discloses the output is a second software module (fig. 16, unit 208).

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0	10	7	7	2	1	0	2	1	8	5	5	7	0	0	1	0
3	8	5	5	1	0	0	1	0	10	7	7	1	1	0	1	1
5	0	1	1	2	7	10	2	7	0	0	0	1	5	8	1	5

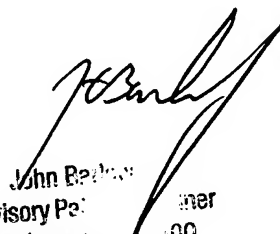
**Fig. 11**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL



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